

Trestle

The existing trestle (Photos 8, 9, and 10) is constructed of pre-cast concrete deck panels and consists of pile caps supported by pre-stressed, hexagonal concrete pilings. The existing trestle would remain in place since it has an estimated 27 years of useful design life remaining.

The trestle would be extended approximately 180 feet offshore from the existing trestle. This would add another 34,000 square feet to the trestle's existing over-water coverage.



Photo 8: Existing trestle and terminal building with concrete pilings



Photo 9: Side view of current Port Townsend Ferry Terminal (looking east)



Photo 10: Existing main trestle and end of Slip 2

Holding Area Capacity

The existing capacity of the vehicle holding area would be increased by extending the trestle, relocating Rotary Park, and adding a new remote holding area on SR 20.

The vehicle holding capacity for the Proposed Action would be as follows:

Trestle: 189

- Current dock area: 86 vehicles
- Proposed dock extension: 70 vehicles
- Proposed relocated park area: 33 vehicles

SR 20 Holding: 30

- Holding area on SR 20 southwest of the trestle: 30 vehicles

Remote Holding Area: 80

- Proposed remote holding area: 80 vehicles

Total: 299 vehicles

The trestle extension would provide capacity for an additional 70 vehicles, and the area currently occupied by the Rotary Park and a city-owned parking lot (used by park and US Bank customers) would provide capacity for an additional 33 vehicles. The new remote holding area on SR 20 would provide capacity for 80 vehicles. This area is intended to replace the existing Indian Point remote holding area which has a capacity of approximately 100 vehicles. Two holding lanes (approximately 750 linear feet) would be added along northbound SR 20 adjacent to the Port of Port Townsend marina. The two new holding lanes would be added by shifting the existing SR 20 centerline and the northbound and southbound travel lanes slightly to the north (see Exhibit 2). The inner of the two holding lanes would use the existing impervious shoulder lane and the outer of the two lanes would

use a new lane constructed of pervious paving materials. All work would occur within the existing WSDOT SR 20 right-of-way. The bike path that currently uses the roadway shoulder in this area would be re-routed to the south side of a row of poplar trees.

The remote holding area would be used during high traffic periods when the holding capacity at the terminal is not enough to accommodate the demand. Advanced signing on SR 20 and at the terminal would indicate that the remote holding area is in use. Upon entry to the remote holding area, drivers would be given a pass, which would prevent queue jumping. Upon release from the remote holding area, drivers with passes would proceed to the toll booths for payment and loading.

Terminal Layout and Traffic Flow

The terminal layout would be modified as shown below in response to the trestle extension and to improve traffic flow. The existing toll booths would be relocated and realigned to be more efficient, the exit lanes would be straightened, Rotary Park would be relocated, the terminal building would be expanded, and employee parking would be relocated.



Existing Terminal Layout



Proposed Terminal Layout

Toll Booths

The existing toll booths (Photo 11) currently have an in-line, tandem configuration, which is inefficient for the sale of tickets. When compared to a standard side-by-side toll booth configuration, the in-line arrangement does not process as many vehicles and this in turn causes backups onto SR 20. The Proposed Action would relocate the existing toll booths in a side-by-side configuration in order to process vehicles faster.

Exit Lanes

The exit lanes would be straightened and the current traffic signal at the terminal entrance/exit would be relocated northward to align with the new exit lanes and to accommodate left-hand turns onto SR 20 (see Exhibit 2). This would allow for more efficient off-loading operation as vehicles, especially larger trucks, would not need to slow through the existing curve. It would also improve pedestrian safety by eliminating the existing pedestrian crossings of lanes to and from the toll booths (see the existing terminal layout photo above).



Photo 11: Existing toll booths

Rotary Park

Straightening the exit lanes would require the displacement of Rotary Park and the adjacent 16-space parking lot that is shared by US Bank customers and park users. Rotary Park would be relocated to the south side of the ferry trestle, with a pedestrian stairway to the adjacent beach. Conceptual drawings are being prepared to show how the size and character of the park would be maintained or enhanced. A memorial to the tribal heritage in the area (a bronze canoe) would be included in the design.

Terminal Building

The terminal building would be expanded to provide additional waiting area for passengers (Photos 12 and 13). Because the trestle would be extended, a covered walkway would be constructed between the terminal building and the ferry loading area. A walkway would also be added between the two slips. A pedestrian walkway would extend along the north side of the trestle from SR 20 (Water Street) to the terminal building.



Photo 12: Existing Terminal Building



Photo 13: Looking southeast with Terminal Building on left

Employee Parking

The 20 existing employee parking spaces would be relocated from the northwest corner and water end of the existing trestle to the south and east sides of the new trestle. An additional 10 spaces would be provided in response to increased staffing as ferry traffic rises.

Off-shore Dredging

As with the outer dolphins described previously, off-shore dredging would be vessel-dependent and would only be required if the 124- to 144-car vessel is selected. Dredging would be included in the last phase of construction, after the decision on the vessel size has been made. Approximately 13,000 cubic yards of soil would be dredged from the area in front of the trestle extension, which has been dredged previously. No dredging would be required for either the 65-car or the 100-car vessel.

Improved Stormwater Treatment

Stormwater runoff from the existing terminal is currently filtered through an oil-water separator and then discharged into the City of Port Townsend's storm drain system. No other treatment is provided. The Proposed Action would provide treatment that complies with the WSDOT *Highway Runoff Manual*. The stormwater treatment would be provided in a buried concrete vault at the southwest corner of the relocated Rotary Park.

Other Environmental Improvements

The existing sub-tidal borrow pit located just to the northeast of the ferry pier would be filled to the minus 14-foot mean lower low water (MLLW) elevation, providing a surface area of approximately 0.78 acre that would be recolonized with eelgrass. The subtidal borrow pit is on both private and public submerged land. The Washington Department of Natural Resources (WDNR) manages the half of the pit further offshore and WSF intends to only fill this publicly managed portion. Because dredging as part of the Proposed Action is vessel-dependent and the vessel decision will not be made until after pit fill material is required, dredged material to accommodate the 124- to 144-car vessel would not be used to fill the borrow pit. WSF will coordinate with the U.S. Army Corps of Engineers on potential beneficial reuse of clean, noncontaminated materials from dredging projects in the Puget Sound area. Fill material would come from an approved site.

Strategies to introduce light under the trestle would be implemented to improve fish passage along the shoreline. Such strategies may include providing solar tubes, using fiber optic tubes that would run under the pier, and painting reflective surfaces under the trestle.

Related Improvements

Power

The existing electrical service equipment is 20 years old and in poor condition. The electrical load that is required by new hydraulic transfer spans at Slips 1 and 2 would increase the load of the existing system. Separating the shore power requirements from the other loads at the facility and provisions for a standby generator will necessitate changes to the existing power distribution system. In addition, the existing system creates a sight obstruction between off-loading vehicles and pedestrians crossing to purchase tickets at the toll booths (Photos 14 and 15). As part of the Proposed Action, the main service equipment would be removed and new electrical distribution equipment would be installed.



Photo 14: Electrical equipment enclosure near toll booths



Photo 15: Electrical equipment enclosure viewed from exit lane

Lighting

Trestle lighting would be replaced and additional lighting would be installed along SR 20 and for the employee parking area, the holding lanes, and along the new exit lanes. The new lighting would be hooded and shielded so that direct light emitted above the light would be minimized and light would be directed towards the trestle area.

Communications

Updating the communication systems would require new conduit from the terminal building to the toll booths. A new conduit would be required for the new telephone service to the facility.

Traffic Controls

Traffic controls currently consist of a directional sign and traffic signal loops. The directional sign is activated from the toll booths and prohibits the left turn for southbound traffic. The traffic controls would be removed and relocated because of the revised entrance and exit to the facility.

Water Supply

The existing water supply line is a 2-inch-diameter pipe across the trestle, with a 2-inch connection to Slip 1 and a 1½-inch connection across to Slip 2. The water supply lines would be replaced because they are past their design life.

Sewer Lines

There is an existing 8-inch sewer line across the trestle and a 4-inch line across Slips 1 and 2. The sewer lines would be replaced because they are past their design life.

Signage

Signage would include two reader boards for customer information at the toll booths and additional signing at the remote holding area. WSF Operations has also requested that web-linked cameras for customer and operational information be installed so that the public can check conditions at the terminal and WSF staff can view and control ferry traffic.

Fire Protection

A fire protection sprinkler system is installed in the terminal building. The fire protection system is past its design life and would be replaced.

Vessel Operations

WSF is evaluating three different vessel types for the Port Townsend-Keystone route (a new 65-car vessel, a new 100-car vessel, and a 124- to 144-car vessel). The terminal would be designed to accommodate the selected vessel. A separate, supporting SEPA checklist for the vessel selection (*SEPA Checklist: Port Townsend-Keystone Ferry*, May 2006) was prepared for WSF by Alion Science and Technology/JJMA Maritime Sector and key results of that checklist are integrated into the *Port Townsend Ferry Terminal Preservation and Improvement Project SEPA Checklist* where appropriate. The vessel selection is expected to occur in late 2007 or early 2008.

- The Proposed Action assumes that with the 65-car vessel, in order to meet the peak summer demand in 2030, the ferry runs would consist of 2 vessels all day (first departure at 6:30 AM and last arrival at 9:45 PM) and 1 vessel half-day (first departure at 10:30 AM and last arrival at 7:15 PM). This would convert to 25 arrivals/departures each day in 2030 (see Exhibit 4 below).

EXHIBIT 4. FERRY RUNS BY VESSEL TYPE (number of ferry arrivals/departures at Port Townsend Terminal)									
	Existing Conditions	No Build		Proposed Action					
	65-Car Vessel	65-Car Vessel		65-Car Vessel		100-Car Vessel		124-144-Car Vessel	
	2005	2010 year of opening	2030 design year	2010 year of opening	2030 design year	2010 year of opening	2030 design year	2010 year of opening	2030 design year
Summer/Peak	15	15	15	20	25	15	20	10	15
Winter	10	10	10	10	15	10	10	10	10

- The Proposed Action assumes that with the 100-car vessel, in order to meet the peak summer demand in 2030, the ferry runs would consist of 2 vessels all day. This would convert to 20 arrivals/departures each day in 2030.
- The Proposed Action assumes that with the 124- to 144-car vessel, in order to meet the peak summer demand in 2030, the ferry runs would consist of 1 vessel all day and 1 vessel half-day. This would convert to 15 arrivals/departures each day in 2030.

Under the No Build Alternative it is assumed that today's ferry runs (level of service) would continue through 2030. No additional runs would be added and it is assumed that the two existing Steel Electric vessels would continue to operate until retired from the fleet. If retired prior to 2030, they would be replaced with a similar vessel. There is currently no mechanism or funding to initiate the replacement of the vessels, so it could take up to 4 years before a comparable vessel type would be designed, built, and operational. During that time there would be a break in service and travelers would need to find other ways to cross the Sound.

Schedule

Permitting

Permitting would begin in early 2007 after the SEPA Determination of Non-Significance (DNS) has been approved. It is expected that all required environmental permits will be approved about one year later. Construction-related permits for the new remote holding area are assumed to be approved by spring of 2007.

Environmental permits that are expected to be required for this project include:

- Coastal Zone Management Act (CZMA) Consistency Determination from the Washington State Department of Ecology (Ecology)
- Substantial Shoreline Development Permit (SSDP) from the City of Port Townsend
- Hydraulic Project Approval (HPA) from Washington Department of Fish and Wildlife (WDFW)
- Section 10/404 Individual Permit from the U.S. Army Corps of Engineers (USACE)
- A 401 Water Quality Certification (WQC) from the Washington Department of Ecology (WDOE)

- If more than one acre of upland area is affected during construction, a National Pollutant Discharge Elimination System (NPDES) construction permit may be required.
- Endangered Species Act (ESA) Section 7 Concurrence from the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (USFWS)

Construction Staging

The construction staging would include the phases described below.

Spring of 2007 – Construction of the remote holding area.

October 2008 - February 2009 and October 2009 - February 2010. Eel grass mitigation and elements of the project not reliant on a vessel decision (upland and dock improvements). The construction staging would allow for uninterrupted operation of scheduled ferry sailings. It is anticipated that one slip would be closed during construction, while the other slip would be operational. Pile removal and placement is expected to occur during two periods:

- Slip 2 - between October 2008 and February 2009
- Slip 1 - between October 2009 and February 2010

In-water Work

Stage 1: Maintain Slip 1 as the Operational Slip and Construct the New Tie-up Slip (Slip 2):

- Demolish the existing timber dolphins at Slip 2.
- Remove the transfer span at Slip 2.
- Construct the trestle extension.
- Construct the bridge seat.
- Place the hydraulically actuated transfer span system.
- Construct wingwalls.
- Construct dolphins.

Stage 2: Maintain Slip 2 as the Operational Slip and Construct the New Main Slip (Slip 1):

- Demolish the existing timber dolphins at Slip 1.
- Remove the transfer span at Slip 1.
- Construct the trestle extension.
- Construct the bridge seat.
- Place the hydraulically actuated transfer span system.
- Construct wingwalls.
- Construct dolphins.
- Relocate electrical service.

Upland Work

- Construct trestle expansion.
- Reconstruct the toll booths.
- Relocate Rotary Park.
- Expand the terminal building.

2009 –Vessel-dependent elements

- Construction of three outer dolphins (100-car or 124- to 144-car vessel only)
- Dredging at Slips 1 and 2 (124- to 144-car vessel only)